A new *Euphorbia* (Euphorbiaceae) from the western Cape Province

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Euphorbia mira Leach, a new species from the western Cape, belonging in the *E. tuberosa* L. and *E. silenifolia* (Haw.) Sweet affinity is described. A line drawing showing inflorescence details is provided, as well as a photograph showing *E. mira* together with two closely related species from the same locality.
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Euphorbia mira Leach, a nuwe spesie van die Wes-Kaap wat tot die *E. tuberosa* L.- en *E. silenifolia* (Haw.) Sweet-affiniteit behoort, word beskryf. 'n Lyntekening wat detail van die bloeiwyse toon sowel as 'n foto van *E. mira* saam met twee naverwante spesies van dieselfde lokaliteit word ingesluit.
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Introduction

It is perhaps necessary to explain that the publication of this new species is the first step towards clearing up the confusion which exists in the group containing *Euphorbia tuberosa* L., *E. silenifolia* (Haw.) Sweet, and *E. crispa* (Haw.) Sweet. The presently accepted concept of this group is of these three taxa with reasonably clearly defined distributions. Recent field work has, however, disclosed that there may be some half-dozen species involved and that the patterns of distribution are far more complex than is presently recorded in the literature. Since fourteen names have already been published for plants belonging in this small group, mostly with inadequately diagnostic descriptions, it is obvious that the correct application of names and/or the erection of additional names become something of the nature of a jigsaw-puzzle. However, *E. mira* Leach is quite distinct from all other members of the group and cannot be fitted to any of the previously named concepts so that its publication represents the completion of a small section of the puzzle.

Throughout this article reference is made to a 'taxonomic group' as it is by no means clear to which (if any) of the formally published infra-generic divisions of *Euphorbia* it should be referred. Furthermore it is considered that our present overall knowledge of the species is far from adequate for any reliable infra-generic categories to be recognized. It should also be remembered that the existing divisions were set up by workers in the past when knowledge of the species was almost fragmentary compared with our much greater, yet still inadequate, knowledge of today. There was, even then, considerable disagreement concerning the categories and their content, so that reference to them in the present context would serve no useful purpose.

Description

Euphorbia mira *Leach,* sp. nov.

E. tuberosae L. affinibusque nullo dubio arcte cognata sed foliis linearibus angustissimis, inflorescentia praecox, cyathiis minutissimis et semine diversissimo, necnon florescentia aestivali ab omnibus manifesto distinguenda.

TYPUS: — Cape Province: Near Tulbagh, cult. sub. *Leach 17175, Bayer s.n.* (NBG, holotypus; K, PRE, isotypi).

Plant a unisexual geophyte with hysteranthous leaves. *Root* a relatively large subspherical tuber with a single apical growing point. *Leaves* green, glabrous, fleshy, extremely narrow with inrolled margins, almost cylindric low down, becoming canaliculate above, up to 120 mm long, *ca.* 2 mm wide when flattened, sharply tapering into a slightly recurved acute apex. *Inflorescence* a shortly pendunculate, 2 – 5- usually

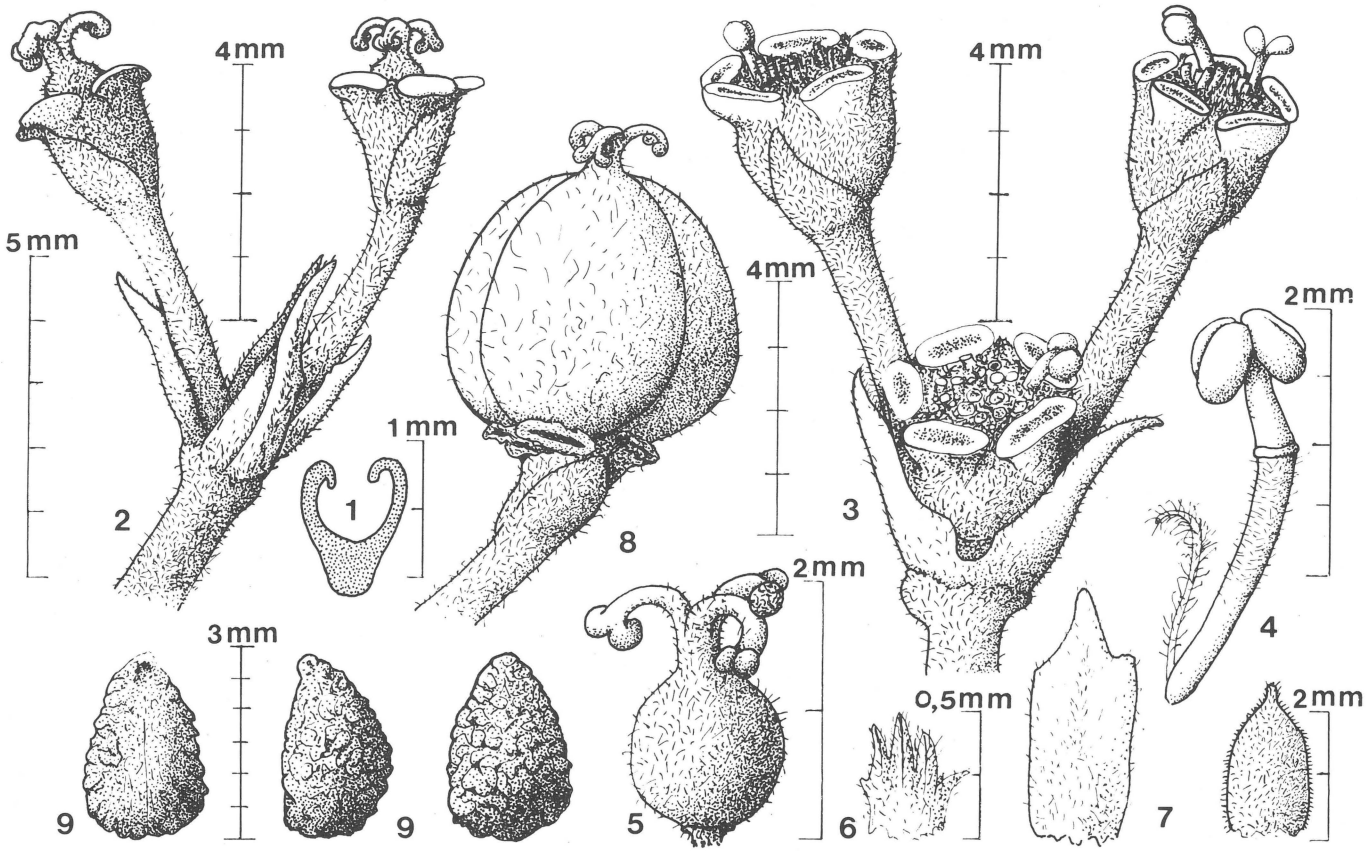

Figure 1 *Euphorbia mira.* (1) Section through leaf; (2) female inflorescence; (3) male inflorescence; (4) male flower with bracteole; (5) female flower; (6) involucral lobe; (7) bracts; (8) capsule; (9) seed.

4-rayed umbel with a whorl of bracts (usually 4) below the umbel; *peduncle* brownish, densely white pubescent, sometimes with a solitary terminal cyathium, abortive in the female, very shortly pedicellate and often persistent in the male; *bracts* unequal, pubescent, ciliate, lightly keeled, oblong acute, 2,5 – 4 mm long, 1,5 mm wide; rays of the umbel similar to the peduncle, 2 – 6 mm long, 0,5 mm diam. *Cyathium* terminal, solitary; *bracts* ovate acute or sometimes shortly apiculate, densely pubescent both sides, *ca.* 2 mm long; *male cyathium* more or less cup-shaped, variably pubescent inside and outside, 2 – 2,5 mm long, 2,5 – 3 mm diam. including the glands; *glands* 5 brownish, transversely oblong-elliptic, *ca.* 1 – 1,25 mm × 0,3 – 0,5 mm; *lobes* 5, dentate, pubescent, *ca.* 0,5 mm long; *male flowers*, pedicels white pubescent; filaments glabrous; bracteoles filiform plumose; anthers brown; pollen yellow; *female cyathium* more or less obconic, *ca.* 2 mm long, 2,5 mm diam. including the glands, otherwise as in the male; *ovary* pale blue-green, densely white pubescent, subspherical, with a few plumose bracteoles *ca.* 0,5 mm long, and a few red-tipped rudimentary staminodes at its base; *styles* free almost to the base, *ca.* 1,25 mm long, spreading recurved, with bifid, spreading, reflexed stigmas. *Capsule* 3-lobed, broadly ovoid, *ca.* 4 mm long, 4,5 mm broad, sparsely somewhat crisped pubescent, barely exserted from the involucre. *Seed* more or less ovoid, subacute, truncate at the base, *ca.* 3 mm × 2 mm, brown, glabrous, heavily encrusted with irregular, often somewhat angular lumps and tubercles, most prominent on the back, the suture indistinct and the hilum recessed (Figure 1).

Known only from the type locality near Tulbagh, perhaps the most remarkable fact relating to *E. mira* is that it grows very closely intermingled with at least two closely related species and possibly a third (Figure 2). All four belong in the affinity of *E. tuberosa* L. and *E. silenifolia* (Haw.) Sweet.

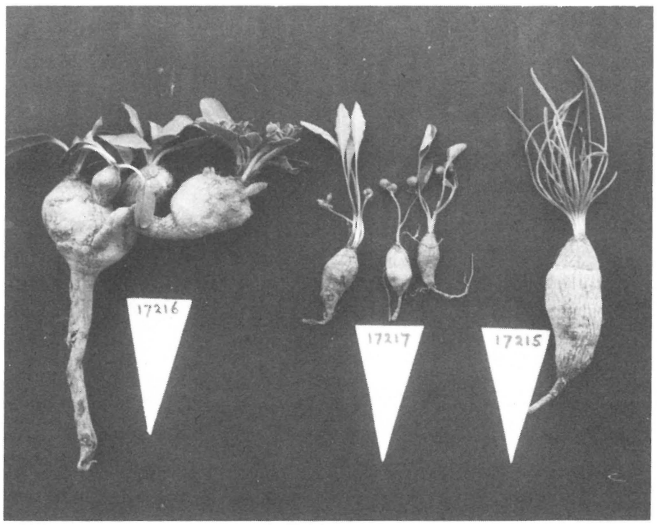

Figure 2 *Euphorbia mira.* Three of the species growing closely intermingled near Tulbagh. *Euphorbia mira (Leach & Perry 17215)* is on the right.

The identities of two of these remain a problem for the future, while it is thought that the third may prove to be a hybrid of these. These two taxa are certainly specifically distinct from each other on the score of habit, root system and foliage alone, as may be judged from Figure 2, while there are also marked differences in their inflorescences.

The locality was visited on 26 September 1984 and all mature plants with the exception of *E. mira* were either flowering or fruiting, with leaves beginning to dry out (in a few plants already withered). *E. mira* which also has the largest simple tubers, was in full leaf and showed no sign of either flowers or fruits.

Two plants of the new species in cultivation at the Karoo Garden, Worcester, subsequently flowered precociously in February 1985, while specimens of the other species from the same habitat remained dormant. Leaves appeared in the *E. mira* specimens soon after flowering and seeds were obtained in April from the one umbel allowed to ripen. A complete description could then be drawn up.

E. mira differs widely from all its known relatives in the unique combination of its extremely narrow, canaliculate, almost cylindric leaves, precocious inflorescence of smaller cyathia and smaller, narrower, more pointed and more heavily tuberculate seeds, as well as in its autumnal flowering time.

Specimens examined

— **3319** (Worcester): Near Tulbagh (– AC), cult. Karoo Garden, II.1985, sub *Leach 17175, Bayer s.n.* (NBG, K, PRE).